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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,751	07/17/2003	Hayder Zahalka	US 132897-2 08SC	1801

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EXAMINER

HUANG, MEI QI

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/621,751	<b>Applicant(s)</b> ZAHALKA ET AL.	
	<b>Examiner</b> Mei Q. Huang	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2003 and 04 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 4 is objected to because of the following informalities: Claim 4 claims species, polypropylene, polyethylene, polypropylene blends, and followed by examples, TPO and TPE which are genus of PP and PE. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-17 are rejected under 35 U.S.C. 102(a) as being anticipated by Troutman et al. (WO 02/074847).

The prior art to Troutman et al. teaches that flame retardant compositions comprising (A) a polymer substrate, (B) an effective flame retarding amount of a synergistic mixture of (i) at least one compound selected from the group consisting of nitroxyl stabilizers, hydroxylamine stabilizers, nitron stabilizers, amine oxide stabilizers, benzofuranone stabilizers, phosphate and phosphonite stabilizers, quinine methide stabilizers and monoacrylate esters of 2,2'-alkylidenebisphenol stabilizers and (ii) at least one compound selected from the group consisting of ....and inorganic flame retardants (page 51, claim 1). Troutman et al. further teach that, in the synergistic mixture (B), component (ii) is present from about 0.25 to about 60% by weight based on

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component (A) (page 35, line 9-10) and the group consisting the useful compounds of component (ii) includes magnesium hydroxide (page 36, line 10). In addition, Troutman et al. disclose that the polymeric substrates is any of a wide variety of polymeric types and specific embodiments are where component (A) is polypropylene, polyethylene, thermoplastics olefin (TPO), ABC or high impact polystyrene (page 32, line 20-23 and page 33, line 1-2). These appear to read on applicant's claims 1-7.

As to Claim 8, Troutman et al.'s working example 2 teaches that molding grade polypropylene is *dry blended* with the test additives (page 40, line 1-3) which appears to meet the limitation of *adding* to a polymer resin composition as effective stabilizing amount of a stabilizer additive required by Claim 8. The rejection made for Claims 1-7 as described above is applied herein to reject the other limitations of this claim.

The rejection made for Claims 1-7 as described above is applied herein to reject Claims 9-11.

As to Claims 12 and 13, Troutman et al.'s working example 6 teaches that fiber grade polyethylene is dry-blended with test additives. And *non-woven fabrics* are produced from the polymer blend formulations by a *spun-bonded or melt-blown process* which appears to meet the process limitations of "a) melt blending ... b) forming ...." required by Claim 12. The rejection made for Claims 1-7 as described above is applied herein to reject the other limitations of Claim 12. The "non-woven fabrics" limitation in prior art's working example 6 is believed to meet the article limitation required by Claim 13.

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The rejection made for Claims 1-7 as described above is applied herein to reject Claims 14-17.

In sum, all the limitations of Claims 1-17 are fully met by Troutman et als' teaching.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troutman et al. (WO 02/074847) in view of Kaprinidis et al. (US Patent Pub. 2004/0198875 with a priority date, August 15, 2001, from Provisional Application 60/312,517).

The prior art to Troutman is adequately presented in paragraph 3 above and is incorporated herein by reference. Troutman et al. do not include other components

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required by the instant claims 18 and 19 in their flame retardant polymer composition.

The prior art to Kaprinidis et al. discloses a flame retardant polyolefin composition comprising stabilizers, which combine good flame retardant properties with light stability and good mechanical properties (Abstract). Kaprinidis et al. teach that fillers are not required in order to improve the flame retardant properties and achieve a higher rating, e.g. in the UL-94 burning test (page 2, paragraph [0023]). This explains why Troutman et al. do not include fillers and reinforcing agent required by the instant claims 18 and 19 in their flame retardant polymer composition because the test methods that used by Troutman et al. in their working examples are merely limited to fire/burning test (page 37, under "Test Methods"). However, Kaprinidis et al. include the filler and reinforcing agent in their flame retardant polyolefin compositions to obtain good mechanical properties. Kaprinidis et al. teach that the invented stabilized composition may optionally also contain various conventional additives (page 18, paragraph [0286]) including basic co-stabilizers, for example, alkali metal salts and alkaline earth metal (page 22, paragraph [0325]) which reads on applicant's claim 18 and fillers and reinforcing agents, for example, calcium carbonate (page 22, paragraph [0327]) which reads on applicant's claim 19. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the filler and reinforcing agents, as taught by Kaprinidis et al, in the flame retardant polymer formulation of Troutman et al. to not only obtain good flame retardant properties with light stability but also good mechanical properties as evidenced by Kaprinidis et al.

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**Conclusion**

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure. The following references have been cited to show the state of the art with respect to the study of stabilized flame-retardant polymer resin.

US Patent 6,444,733 to Stadler

US Patent 6,664,317 to King, III

US Patent Pub. 2004/0138351 to Kaprinidis et al.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mei Q. Huang whose telephone number is (571) 272-3549. The examiner can normally be reached on 8am - 4pm, Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mei Q. Huang  
Patent Examiner

February 14, 2005

  
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SUPERVISORY PATENT EXAMINER  
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